

**Opening Statement**  
**Ranking Member Eddie Bernice Johnson**  
**Committee on Science, Space, and Technology**

*“Astrobiology: Search for Biosignatures  
in our Solar System and Beyond”*

December 4, 2013

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Good morning and welcome to our distinguished panel of witnesses.

There is no denying Humankind’s interest in establishing whether life exists elsewhere in the Universe. People have probably speculated on that possibility since time immemorial.

The question of whether there is life beyond Earth got increased attention this year following the Kepler space telescope’s discovery of Earth-sized exoplanets in habitable zones around other stars, and Curiosity’s finding of traces of water in Martian soil.

Astrobiology, as we will hear during this hearing, is an interdisciplinary field that makes use of many fields of science to investigate the possibility of life on other worlds.

As might have been guessed, NASA has played a major role in astrobiology’s development as a formal discipline. NASA’s Viking missions to Mars, launched in 1976, included three biology experiments designed to look for possible signs of life. The scientific excitement generated by the Viking mission, new results from solar system exploration and astronomical research programs in the mid-1990s, and advances in the fundamental biological sciences, led to the establishment of the NASA Astrobiology Program in 1996.

Today, NASA’s Astrobiology Program consists of four elements--grants programs, technological activities aimed at the development of new scientific instrumentation, technological activities aimed at the field-testing of new scientific instruments, and the NASA Astrobiology Institute.

In addition, astrobiology has become a cross-cutting theme in all of NASA’s space science endeavors. For example, rather than being stand-alone investigations, many planetary science and astronomy missions work together in their search for life in the Universe.

Mr. Chairman, I would be remiss were I not to make note that continuing to provide adequate funding to NASA’s science programs is of critical importance if we are to continue to make progress in astrobiology as well as other important scientific fields.

I hope that Congress recognizes the vital contributions of ongoing and future NASA space science missions in answering whether there is life in the Universe. This hearing is an opportunity to shine light on these contributions.

I look forward to hearing from our witnesses, and I yield back the balance of my time.